GPOD OF IDAHO (PWS 6060102)
SOURCE WATER ASSESSMENT FINAL REPORT

August 19, 2002

State of Idaho
Department of Environmental Quality

Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This assessment is based on a land use inventory of the designated assessment area and sensitivity factors associated with the well and aquifer characteristics.

This report, *Source Water Assessment for the GPOD of Idaho, Shelley, Idaho* describes the public drinking water system, the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the public water system (PWS).**

The GPOD of Idaho (PWS # 6060102) is a non-community non-transient water system. The drinking water system consists of one well source. The well serves approximately 130 persons and is located on the facility's property.

The potential contaminant sources within the delineation capture zones include aboveground storage tank (AST) sites, underground fuel storage tank (UST) sites, dairies, gravel pits, former leaking underground fuel storage tank (LUST) sites, landfills, and a Nation Pollutant Discharge Elimination (NPDES) site. Also found were sites regulated under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), Superfund Amendments and Reauthorization Act (SARA), Resource Conservation Recovery Act (RCRA) and the Toxic Release Inventory (TRI). Other sources identified that may contribute to the overall vulnerability of the water source were businesses within the delineated areas that may be considered potential contaminants sources, Group 1 sites (sites that show elevated levels of contaminants and are not within the priority one areas), recharge points (active, proposed, and possible recharge sites on the Snake River Plain), and deep injection wells. Injection wells are regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage. Additionally, Highway 26/91 and a railroad are transportation corridors that cross the delineations. If an accidental spill occurred from any of these potential contaminant sources, inorganic chemical (IOC) contaminants, volatile organic chemical (VOC) contaminants, synthetic organic chemical (SOC) contaminants, or microbial contaminants could be added to the aquifer system. A complete list of potential contaminant sources is provided with this assessment.

For the assessment, a review of laboratory tests was conducted using the Idaho Drinking Water Information Management System (DWIMS) and the State Drinking Water Information System (SDWIS). Total coliform bacteria were detected in the distribution system in January 2002. The IOCs barium, fluoride, and nitrate have been detected in the drinking water, but at levels below the maximum contaminant level (MCL) for each chemical. No VOCs or SOCs have been detected in the drinking water.

Final susceptibility scores for the GPOD of Idaho drinking water system were derived from equally weighting system construction scores, hydrologic sensitivity scores, and potential contaminant/land use scores. Therefore, a low rating in one or two categories coupled with a higher rating in other categories results in a final rating of low, moderate, or high susceptibility. With the potential contaminants associated with most urban and heavily agricultural areas, the best score a well can get is moderate. Potential contaminants are divided into four categories, IOCs, (i.e. nitrates, arsenic), VOCs, (i.e. petroleum products), SOCs, (i.e. pesticides), and microbial contaminants (i.e. bacteria). As different wells can be subject to various contamination settings, separate scores are given for each type of contaminant.

The final susceptibility rankings for the well scored high for IOCs, VOCs, SOCs, and microbial contaminants. Hydrologic sensitivity rated high and system construction rated moderate. Potential contaminant inventory and land use scores rated high for IOCs (i.e., nitrates), VOCs (i.e. petroleum related products), and SOCs (i.e., pesticides) and moderate for microbial contaminants (i.e., fecal coliform).

The capture zones for the well intersects a priority area for the SOC, atrazine. The organic priority area is areas where greater than 25% of the wells show levels greater than 1% of the primary standard or other health standards (MCL for atrazine is 0.003 mg/L). Atrazine is a widely used herbicide for control of broadleaf and grassy weeds.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. If the system should need to expand in the future, new well sites should be located in areas with as few potential sources of contamination as possible, and the site should be reserved and protected for this specific use.

An effective drinking water protection program is tailored to the particular local drinking water protection area. A community with a fully developed drinking water protection program will incorporate many strategies. For GPOD of Idaho, drinking water protection activities should continue efforts aimed at keeping the distribution system free of microbial contaminants that may affect the drinking water quality. If microbial contaminants continue and/or arise, GPOD may want to consider the addition of a disinfection system. In addition, drinking water protection activities should focus on correcting any deficiencies outlined in the sanitary survey (an inspection conducted every five years with the purpose of determining the physical condition of a water system’s components and its capacity). The well should maintain sanitary standards regarding wellhead protection. Also, any new sources that could be considered potential contaminant sources in the well's zones of contribution should also be investigated and monitored to prevent future contamination. No potential contaminants (pesticides, paint, fuel, cleaning supplies, etc.) should be stored or applied within 50 feet of the well. Land uses within most of the source water assessment area are outside the direct jurisdiction of the GPOD of Idaho. Therefore partnerships with state and local agencies, industrial and commercial groups should be established to ensure future land uses are protective of ground water quality. Educating employees about source water will further assist the system in its monitoring and protection efforts.

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. A strong public education program should be a primary focus of any drinking water protection plan. Public education topics could include household hazardous waste disposal methods, proper lawn and garden care and the importance of water conservation to name but a few. There are multiple resources available to help water systems implement protection programs, including the Drinking Water Academy of the EPA. Drinking water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture and the Bingham County Soil and Water Conservation District. As major transportation corridors intersect the delineations (such as Highway 26/91), the Idaho Department of Transportation should be involved in protection efforts.

A system must incorporate a variety of strategies in order to develop a comprehensive drinking water protection plan, be they regulatory in nature (i.e. zoning, permitting) or non-regulatory in nature (i.e. good housekeeping, public education, specific best management practices). For assistance in developing protection strategies please contact the Pocatello Regional Office of the Idaho Department of Environmental Quality or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR GPOD OF IDAHO, SHELLEY, IDAHO

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are contained in this report. The list of significant potential contaminant source categories and their rankings used to develop this assessment is also attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess over 2,900 public drinking water sources in Idaho for their relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area, sensitivity factors associated with the well, and aquifer characteristics. All assessments must be completed by May of 2003. The resources and time available to accomplish assessments are limited. Therefore, an in-depth, site-specific investigation to identify each significant potential source of contamination for every public water system is not possible. **This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system.**

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. DEQ recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a drinking water protection program should be determined by the local community based on its own needs and limitations. Wellhead or drinking water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

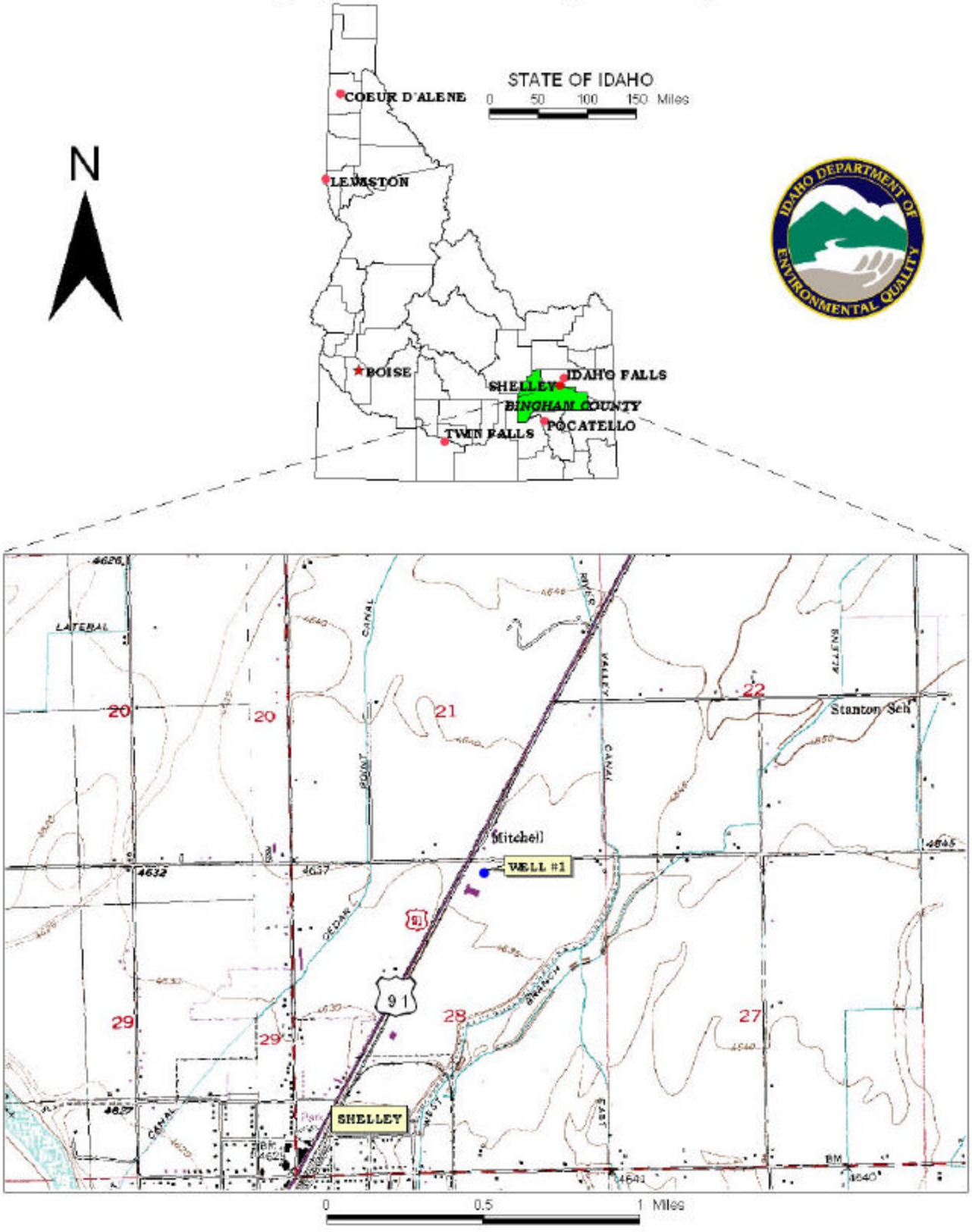
Section 2. Conducting the Assessment

General Description of the Source Water Quality

The GPOD of Idaho is a non-community non-transient public drinking water system located in Bingham County (Figure 1). The drinking water system consists of one well source. The well serves approximately 130 persons and is located on the facility's property.

Total coliform bacteria were detected in the distribution system in January 2002. The inorganic chemicals (IOCs) barium, fluoride, and nitrate have been detected in the drinking water, but at levels below the maximum contaminant level (MCL) for each chemical. No volatile organic chemicals (VOCs) or synthetic organic chemicals (SOCs) have been detected in the drinking water.

FIGURE 1. Geographic Location of GPOD of Idaho



Defining the Zones of Contribution--Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the zone of contribution into time-of-travel zones (zones indicating the number of years necessary for a particle of water to reach a pumping well) for water in the aquifer. Washington Group International (WGI) was contracted by DEQ to define the public water system's zones of contribution. WGI used a refined computer model approved by the EPA in determining the 3-year (Zone 1B), 6-year (Zone 2), and 10-year (Zone 3) Time-of-Travel (TOT) for water associated with the East Margin Area of the Eastern Snake River Plain (ESRP) hydrologic province in the vicinity of the GPOD of Idaho. The computer model used site specific data, assimilated by WGI from a variety of sources including operator records well logs and hydrogeologic reports. A summary of the hydrogeologic information from the WGI is provided below.

Hydrogeologic Conceptual Model

The East Margin Area encompasses 821 square miles, representing approximately 8 percent of the total area of the ESRP hydrologic province. The majority of the East Margin Area is within Bingham County, with small areas occurring in Bannock, Bonneville, and Power counties.

The regional ESRP aquifer is the most significant aquifer in the East Margin Area and consists primarily of basalt of the Quaternary-aged Snake River Group. However, additional water-bearing units are used for water supply along the margin of the ESRP. In order of decreasing age, the most significant aquifers in the Michaud Flats area are bedded rhyolite (volcanic rock) of the Tertiary-aged Starlight Formation and Quaternary-aged gravels of a low relief plain formed by running water (pediment), basalt of the Big Hole Formation, and stream deposits of the Sunbeam Formation (see Jacobson, 1982, p. 7, and Corbett, et al., 1980, pp. 6-10). A few shallow domestic wells in the central Michaud Flats area also are completed in Michaud Gravel, which is the shallow water-table aquifer. The American Falls Lake Beds Formation (AFLB) confines the deeper aquifers and averages 80 feet in thickness in the central Michaud Flats area (Jacobson, 1984, p. 6). The AFLB pinches out in the eastern Michaud Flats area near the Portneuf River, effectively combining the shallow and deep stream deposits into a single water table aquifer (Bechtel, 1994, p. 2-2). Other aquifers in the East Margin Area include fractured quartzite that has been developed near Blackfoot, stream deposits near the cities of Firth and Basalt, and pediment gravels in the Gibson Terrace area near Tyhee and Chubbuck.

PWS wells in the East Margin Area of the ESRP province produce water from five different aquifers: the Regional Eastern Snake River Plain aquifer, three alluvial (or stream deposited) aquifers (Eastern Michaud Flats, Firth/Basalt, and Gibson Terrace/Pocatello Bench) and a quartzite aquifer (Blackfoot). The Regional Eastern Snake River Plain Aquifer, the water source for the GPOD of Idaho, is described in detail below.

Regional Eastern Snake River Plain Aquifer

The ESRP is a northeast trending basin located in southeastern Idaho. The 10,000 square miles of the plain are primarily filled with highly fractured layered Quaternary-aged basalt flows of the Snake River Group, which are between (intercalated) layers of rocks formed by sediment deposition (sedimentary) along the margins (Garabedian, 1992, p. 5). Quaternary-aged basalts are estimated to be 100 to 1,500 feet thick, with the majority of the area in the range of 100 to 500 feet thick (Whitehead, 1992, Plate 3). Individual basalt flows range from 10 to 50 feet thick, averaging 20 to 25 feet thick (Lindholm, 1996, p. 14). Basalt is thickest in the central part of the eastern plain and thins toward the margins. Whitehead (1992, p. 9) estimates the total thickness of the flows to be as great as 5,000 feet. A thin layer (0 to 100 feet) of windblown and stream-produced sediments overlies the basalt. The plain is bounded on the northeast by rocks of the Yellowstone Group (mainly rhyolite) and Idavada Volcanics to the southwest. These rocks may also underlie the plain (Garabedian, 1992, p. 5). Granite of the Idaho batholith borders the plain to the northwest, along with sedimentary rocks and rocks changed by heat and/or pressure (metamorphic) (Cosgrove et al., 1999, p. 10). The Snake River flows along part of the southern boundary and is the only drainage that leaves the plain. A high degree of connectivity with the regional aquifer system is displayed over much of the river as it passes through the plain. However, some reaches are believed to be perched or separated from the main ground water by unsaturated rock, such as the Lewisville-to-Shelly reach. Rivers and streams entering the plain from the south are tributary to the Snake River. With the exception of the Big and Little Wood rivers, rivers entering from the north vanish into the basalts of the Snake River Plain aquifer that have a higher ability to transmit water.

The layered basalts of the Snake River Group host one of the most productive aquifers in the United States. The aquifer is generally considered unconfined, yet may be confined locally because of interbedded clay and dense unfractured basalt (Whitehead, 1992, p. 26). Whitehead (1992, p. 22) and Lindholm (1996, p.1) report that well yields of 2,000 to 3,000 gal/min are common for wells open to less than 100 feet of the aquifer. Transmissivities obtained from test data in the upper 100 to 200 feet of the aquifer range from less than 0.1 square feet per second (ft^2/sec) to 56 ft^2/sec ($1.0x10^4$ to $4.8x10^6$ ft^2/day; Garabedian, 1992, p. 11, and Lindholm, 1996, p. 18). Lindholm (1996, p. 18) estimates aquifer thickness to range from 100 feet near the plain's margin to thousands of feet near the center. Models of the regional aquifer have used values ranging from 200 to 3,000 feet to represent aquifer thickness (Cosgrove et al., 1999, p.15).

Regional ground water flow is to the southwest paralleling the basin (Cosgrove et al., 1999; deSonneville, 1972, p. 78; Garabedian, 1992, p. 48; and Lindholm, 1996, p. 23). Reported water table gradients range from 3 to 100 ft/mile and average 12 ft/mile (Lindholm, 1996, p. 22). Gradients steepen at the plain's margin and at discharge locations. The estimated effective ratio of the rock's open space volume to its total volume range from 0.04 to more than 0.25 (Ackerman, 1995, p.1, and Lindholm, 1996, p.16).

The majority of aquifer recharge results from surface water irrigation activities (incidental recharge), which divert water from the Snake River and its tributaries (Ackerman, 1995, p. 4, and Garabedian, 1992, p. 11) and locally from canal leakage. Natural recharge occurs through stream losses, direct precipitation, and tributary basin underflow.

Aquifer discharge occurs primarily as seeps and springs on the northern wall of the Snake River canyon near Thousand Springs and near American Falls and Blackfoot (Garabedian, 1992, p.17). To a lesser degree, discharge also occurs through pumping and underflow.

The East Margin Area is among the most transmissive regions of the regional aquifer, therefore it has a higher ability to transmit water. A transmissivity of 21 ft^2/sec was used to represent the upper 200 feet of the regional aquifer in the East Margin Area in the three-dimensional USGS ground water flow model (Garabedian, 1992, Plate 6). The equivalent hydraulic conductivity or the rate at which water can move through permeable material is 9,072 feet per day (ft/day). This value is consistent with the range of hydraulic conductivity (9,500 to 11,708 ft/day) calculated using data from a constant-rate aquifer test conducted in 1981 (Jacobson, 1982, p. 23). This range was calculated by dividing the estimated transmissivity (228,000 to 281,000 ft^2/day) by the perforated interval of the observation well (24 feet). The geometric mean hydraulic conductivity based on analysis of specific capacity data from PWS wells (135 ft/day) is significantly lower.

A published water table map of the Upper Snake River Basin (IDWR, 1997, p. 9) indicates that the ground water flow direction in the ESRP aquifer in the East Margin Area is similar to that depicted at the regional scale (e.g., Garabedian, 1992, Plate 4).

Recharge from precipitation and surface water irrigation in the East Margin Area ranges from less than 10 to more than 20 inches per year (Garabedian, 1992, Plate 8). The low end of the range applies to the area near Blackfoot, while the high end applies to the area on the west side of American Falls Reservoir near Aberdeen.

Kjelstrom (1995, p. 13) reports an annual river loss of 280,000 acre-feet to the regional basalt aquifer for the 27.5-mile Lewisville-to-Shelley reach of the Snake River and 110,000 acre-feet for the 23.5-mile Shelley-to-Blackfoot reach. Annual river gains of 1,900,000 acre-feet for the 36.6-mile Blackfoot-to-Neeley reach are also estimated (Kjelstrom, 1995, p. 13). A seepage study conducted in the fall of 1980 on the Portneuf River showed a gain of about 560 cubic feet per second (ft^3/sec) (405,691 acre-feet) for the 13-mile Pocatello-to-American Falls Reservoir reach (Jacobson, 1982, p. 16). The average flow in the Blackfoot River near the city of Blackfoot is low at Station #13068500 (5.2 ft^3/sec; USGS, 2001) compared to the flow in the Snake River near the city of Blackfoot at Station #13069500 (2,900 ft^3/sec; USGS, 2001).

The water producing zones for the GPOD of Idaho well is from the regional basalt aquifer. The delineated source water assessment area for the GPOD of Idaho well trends in a northeast direction and is elongated and conical in shape. The length of the delineation extends approximately 15 miles and extends into the City of Idaho Falls. In this case the Snake River is assumed to be the western boundary source of the aquifer. The actual data used by WGI in determining the source water assessment delineation areas are available from DEQ upon request.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act. Furthermore, these sources have a sufficient likelihood of releasing such contaminants into the environment at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination.

Field surveys conducted by DEQ and reviews of available databases identified potential contaminant sources within the delineation areas. Some of these sources include aboveground storage tank (AST) sites, underground fuel storage tank (UST) sites, dairies, gravel pits, and former leaking underground fuel storage tank (LUST) sites.

It is important to understand that a release may never occur from a potential source of contamination provided best management practices are used at the facility. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release.

Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination, such as educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply well.

Contaminant Source Inventory Process

A two-phased contaminant inventory of the GPOD of Idaho water system was conducted in the Spring of 2002. The first phase involved identifying and documenting potential contaminant sources within the GPOD of Idaho source water assessment area through the use of computer databases and Geographic Information System (GIS) maps developed by DEQ. Then DEQ conducted the second phase or enhanced inventory to validate the sources identified in phase one and to identify additional potential sources of contamination in the delineated source water assessment area. This task was undertaken with the assistance of Mr. Kevin Searle. At the time of the enhanced inventory no additional potential contaminant sources were found within the delineated source water area. A map with the well location, delineated areas, and potential contaminant sources are provided with this report. Each potential contaminant source has been given a unique number that references tabular information associated with the public water well (Appendix A).

Section 3. Susceptibility Analysis

The susceptibility of the well to contamination was ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity of the well, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for the well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. Appendix B contains the susceptibility analysis worksheet. The following summaries describe the rationale for the susceptibility ranking.

Hydrologic Sensitivity

The hydrologic sensitivity of a well is dependent upon four factors. These factors are surface soil composition, the material in the vadose zone (between the land surface and the water table), the depth to first ground water, and the presence of a 50-foot thick fine-grained zone above the water producing zone of the well. Slowly draining soils such as silt and clay typically are more protective of ground water than coarse-grained soils such as sand and gravel. Similarly, fine-grained sediments in the subsurface and a water depth of more than 300 feet from the surface protect the ground water from contamination.

Hydrologic sensitivity was rated high for the well (Table 1). This is based upon moderate to well drained soil classes, as defined by the National Resource Conservation Service (NRCS), underlying the area of the delineation. Soils that have poor to moderate drainage characteristics have better filtration capabilities than faster draining soils. The well log indicates the vadose zone composition consists of 64 feet of gravel sand and some clay, along with 33 feet of broken and firm basalt. The first depth to ground water for the well is less than 300 feet from the surface and there is a lack of 50 feet cumulative thickness of low permeability material that could help to reduce the downward movement of contaminants.

Well Construction

Well construction directly affects the ability of the well to protect the aquifer from contaminants. System construction scores are reduced when information shows that potential contaminants will have a more difficult time reaching the intake of the well. Lower scores imply a system that can better protect the water. If the casing and annular seal both extend into a low permeability unit then the possibility of cross contamination from other aquifer layers is reduced and the system construction score goes down. If the highest production interval is more than 100 feet below the water table, then the system is considered to have better buffering capabilities. When information was adequate, a determination was made as to whether the casing and annular seals extend into low permeability units and whether current public water system (PWS) construction standards are met.

The system construction score rated moderate for the well. The sanitary survey (conducted by the Southeastern District Health Department) states there is a well vent on the wellhead. The sanitary survey also states the surface seal is in good condition. The well casing height is adequate and the well is located outside of a 100-year floodplain, decreasing the chance of contaminants being drawn into the drinking water source by surface water flooding.

The well was drilled in 1973 and is 175 feet deep. The 12-inch casing was set to 73 feet below ground surface (bgs) into firm black basalt. The 8-inch casing was set to 151 feet bgs into firm gray basalt. The annular seal was placed to 75 feet bgs into gray basalt using cement grout and bentonite. The static water table was 97 feet bgs at the time of drilling. The producing zones were identified from 157 to 162 feet bgs and from 168 to 175 feet bgs.

The Idaho Department of Water Resources (IDWR) *Well Construction Standards Rules (1993)* require all public water systems to follow DEQ standards. IDAPA 58.01.08.550 requires that PWSs follow the *Recommended Standards for Water Works (1997)* during construction. Under current standards, all PWS wells are required to have a 50-foot buffer around the wellhead and if the well is designed to yield greater than 50 gallons per minute (gpm) a minimum of a 6-hour pump test is required. These standards are used to rate the system construction for the well by evaluating items such as condition of wellhead and surface seal, whether the casing and annular space is within consolidated material or 18 feet below the surface, the thickness of the casing, etc. If all criteria are not met, the public water source does not meet the IDWR Well Construction Standards. In this case, there was insufficient information available to determine if the well meets all the criteria outlined in the IDWR Well Construction Standards.

Potential Contaminant Source and Land Use

The potential contaminant sources and land use within the delineated zones of water contribution are assessed to determine the well's susceptibility. When agriculture is the predominant land use in the area, this may increase the likelihood of agricultural wastewater infiltrating the ground water system. Agricultural land is counted as a source of leachable contaminants and points are assigned to this rating based on the percentage of agricultural land. The predominant land use within the delineated capture zones of the GPOD of Idaho is irrigated agricultural land.

In terms of potential contaminant sources and land use susceptibility the ratings are as follows. The well rated high for IOCs (i.e., nitrates), VOCs (i.e. petroleum related products), and SOCs (i.e., pesticides) and moderate for microbial contaminants (i.e., fecal coliform).

Most of the potential contaminant sources fall within the 6-10 year TOT zone. These sources include USTs, dairies, gravel pits, and LUSTs. The locations of potential contaminant sources and delineated TOT zones for the well is shown on Figure 2.

Final Susceptibility Rating

A detection above a drinking water standard (MCL), any detection of a VOC or SOC, or having potential contaminant sources within 50 feet of the wellhead will automatically give a high susceptibility rating to the final well ranking despite the land use of the area because a pathway for contamination already exists. Hydrologic sensitivity and system construction scores are heavily weighted in the final scores. Having multiple potential contaminant sources in the 0 to 3-year time of travel zone (Zone 1B) and a large percentage of agricultural land contribute greatly to the overall ranking.

Table 1. Summary of GPOD of Idaho Susceptibility Evaluation

Drinking Water Source	Susceptibility Scores									
	Hydrologic Sensitivity	Potential Contaminant Inventory and Land Use				System Construction	Final Susceptibility Ranking			
		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
Well	H	H	H	H	M	M	H	H	H	H

H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility
IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Susceptibility Summary

The final susceptibility ranking for the well was high for IOC, VOC, SOC, and microbial contaminants. These ratings reflect the hydrologic sensitivity, system construction, and potential contaminants inventory and land use within the delineated source water assessment areas for the well.

The IOCs barium, fluoride, and nitrate have been detected in the drinking water, but at levels below the MCL for each chemical. No VOCs or SOCs have been detected in the well water.

The county level agriculture-chemical use is considered high in this area due to the significant amount of agricultural land. Although there may only be a small portion of agriculture land in the direct vicinity of the well, it is useful as a tool in determining the overall chemical usage such as pesticides and how it may impact ground water through infiltration and surface water runoff. In addition, there were potential sources of contamination found within the well's delineated TOT zones (Figure 2).

Section 4. Options for Drinking Water Protection

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. If the system should need to expand in the future, new well sites should be located in areas with as few potential sources of contamination as possible, and the site should be reserved and protected for this specific use.

An effective drinking water protection program is tailored to the particular local drinking water protection area. A community with a fully developed drinking water protection program will incorporate many strategies. For GPOD of Idaho, drinking water protection activities should continue efforts aimed at keeping the distribution system free of microbial contaminants that may affect the drinking water quality. If microbial contaminants continue and/or arise, GPOD may want to consider the addition of a disinfection system. In addition, drinking water protection activities should focus on correcting any deficiencies outlined in the sanitary survey. The well should maintain sanitary standards regarding wellhead protection. Also, any new sources that could be considered potential contaminant sources in the well's zones of contribution should also be investigated and monitored to prevent future contamination. No potential contaminants (pesticides, paint, fuel, cleaning supplies, etc.) should be stored or applied within 50 feet of the well. Land uses within most of the source water assessment area are outside the direct jurisdiction of the GPOD of Idaho. Therefore partnerships with state and local agencies, industrial and commercial groups should be established to ensure future land uses are protective of ground water quality. Educating employees and the public about source water will further assist the system in its monitoring and protection efforts.

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. A strong public education program should be a primary focus of any drinking water protection plan. Public education topics could include household hazardous waste disposal methods and the importance of water conservation to name but a few. There are multiple resources available to help water systems implement protection programs, including the Drinking Water Academy of the EPA. Drinking water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture and the Bingham County Soil and Water Conservation District. Any major transportation corridors that intersect the delineation (such as Highway 26/91), the Idaho Department of Transportation should be involved in protection efforts.

Assistance

Public water supplies and others may call the following DEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the DEQ office for preliminary review and comments.

DEQ Pocatello Regional Office (208) 236-6160

DEQ State Office (208) 373-0502

Website: http://www.deq.state.id.us

Water suppliers serving fewer than 10,000 persons may contact Ms. Melinda Harper (208) 343-7001 or email her at mlharper@idahoruralwater.com, Idaho Rural Water Association, for assistance with drinking water protection (formerly wellhead protection) strategies.

References Cited

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POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100-year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5 mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RCRA – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Appendix A

GPOD of Idaho
Potential Contaminant Sources

Table 2. Potential Contaminants

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
	Butte Arm Canal	0-3	GIS MAP	IOC, VOC, SOC, Microbials
	Snake River Valley Canal	0-3	GIS MAP	IOC, VOC, SOC, Microbials
	Butte Arm Canal	0-3	GIS MAP	IOC, VOC, SOC, Microbials
	Union Pacific Railroad	0-3	GIS MAP	IOC, VOC, SOC, Microbials
	Highway 26/91	0-3	GIS MAP	IOC, VOC, SOC, Microbials
1	LUST Site-Cleanup Completed; Impact Unknown	0-3	Database Search	VOC, SOC
2	LUST Site-Cleanup Completed; Impact Unknown	0-3	Database Search	VOC, SOC
3	LUST Site-Cleanup Completed; Impact Unknown	0-3	Database Search	VOC, SOC
4	UST Site-Farm; Closed	0-3	Database Search	VOC, SOC
5	UST Site-Commercial; Closed	0-3	Database Search	VOC, SOC
6	UST Site-Truck/Transporter; Closed	0-3	Database Search	VOC, SOC
7	UST Site-Not Listed; Closed	0-3	Database Search	VOC, SOC
8	UST Site-Not Listed; Closed	0-3	Database Search	VOC, SOC
9	UST Site-Other; Closed	0-3	Database Search	VOC, SOC
10	UST Site-Other; Closed	0-3	Database Search	VOC, SOC
11	UST Site-Other; Closed	0-3	Database Search	VOC, SOC
12	UST Site-Contractor; Open	0-3	Database Search	VOC, SOC
13	UST Site-Other; Closed	0-3	Database Search	VOC, SOC
14	UST Site-Local Government; Closed	0-3	Database Search	VOC, SOC
15	UST Site-Truck/Transporter; Open	0-3	Database Search	VOC, SOC
16	UST Site-Commercial; Closed	0-3	Database Search	VOC, SOC
17	Dairy	0-3	Database Search	IOC, Microbials
18	Crane Service	0-3	Database Search	VOC, SOC
21	General Contractors	0-3	Database Search	IOC, VOC, SOC
24	Color-Offset Photo Engrave	0-3	Database Search	IOC, VOC
25	Culverts	0-3	Database Search	VOC, SOC
26	Mechanical Contractors	0-3	Database Search	IOC, VOC, SOC
27	Candy & Confectionery Manufacturers	0-3	Database Search	IOC, VOC, Microbials
28	Potato Harvesting/Planting Equipment	0-3	Database Search	VOC, SOC
29	Foods-Frozen Manufacturers	0-3	Database Search	IOC, Microbials
30	Millwork Manufacturers	0-3	Database Search	IOC, VOC, SOC
32	Prefabricated Metal Buildings Manufacturers	0-3	Database Search	IOC, VOC, SOC
33	Farm Supplies (Wholesale)	0-3	Database Search	IOC, VOC, SOC
34	Storage-Household & Commercial	0-3	Database Search	IOC, VOC, SOC
36	Trucking-Motor Freight	0-3	Database Search	VOC, SOC
37	Veterinarians	0-3	Database Search	IOC, VOC, Microbials
38	Water Works Equipment & Supplies	0-3	Database Search	IOC, VOC, SOC
40	Mold Makers	0-3	Database Search	VOC, SOC
41	Printers	0-3	Database Search	VOC
43	Trucking-Heavy Hauling	0-3	Database Search	VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
44	Campgrounds	0-3	Database Search	IOC, VOC, SOC, Microbials
45	Veterinarians	0-3	Database Search	IOC, VOC, Microbials
46	Fire Damage Restoration	0-3	Database Search	VOC, SOC
47	Nurserymen	0-3	Database Search	IOC, SOC
48	Tractor-Dealers (Wholesale)	0-3	Database Search	VOC, SOC
49	Truck Renting & Leasing	0-3	Database Search	VOC, SOC
50	Sheet Metal Work Contractors	0-3	Database Search	IOC, VOC
51	Powder Coatings Manufacturers	0-3	Database Search	IOC, VOC, SOC
52	Furniture Manufacturers	0-3	Database Search	VOC, SOC
53	Signs Manufacturers	0-3	Database Search	IOC, VOC, SOC
54	NPDES Site	0-3	Database Search	IOC, Microbials
55	Toxic Release Inventory	0-3	Database Search	VOC, SOC
56	Toxic Release Inventory	0-3	Database Search	VOC, SOC
57	CERCLA Site	0-3	Database Search	IOC, VOC, SOC
58	CERCLA Site	0-3	Database Search	IOC, VOC, SOC
59	RCRA Site	0-3	Database Search	IOC, VOC, SOC
60	RCRA Site	0-3	Database Search	IOC, VOC
61	Mine/Quarry	0-3	Database Search	IOC, VOC, SOC
62	Deep Injection Well	0-3	Database Search	IOC, VOC, SOC, Microbials
63	Deep Injection Well	0-3	Database Search	IOC, VOC, SOC, Microbials
64	SARA Site	0-3	Database Search	IOC, VOC, SOC
65	SARA Site	0-3	Database Search	IOC, VOC, SOC
66	SARA Site	0-3	Database Search	IOC, VOC
67	SARA Site	0-3	Database Search	VOC, SOC
68	SARA Site	0-3	Database Search	IOC, VOC, SOC
69	SARA Site	0-3	Database Search	VOC, SOC
70	SARA Site	0-3	Database Search	VOC, SOC
71	SARA Site	0-3	Database Search	IOC, VOC, SOC
72	SARA Site	0-3	Database Search	IOC, VOC, SOC
73	SARA Site	0-3	Database Search	IOC, VOC, SOC, Microbials
74	Recharge Point	0-3	Database Search	IOC, VOC, SOC, Microbials
75	AST Site	0-3	Database Search	VOC, SOC
	Union Pacific Railroad	3-6	GIS MAP	IOC, VOC, SOC
	Highway 26/91	3-6	GIS MAP	IOC, VOC, SOC
76	LUST Site-Cleanup Completed; Impact: Groundwater	3-6	Database Search	VOC, SOC
77	LUST Site-Cleanup Completed; Impact Unknown	3-6	Database Search	VOC, SOC
78	LUST Site-Cleanup Completed; Impact Unknown	3-6	Database Search	VOC, SOC
79	LUST Site-Cleanup Completed; Impact Unknown	3-6	Database Search	VOC, SOC
80	LUST Site-Cleanup Completed; Impact Unknown	3-6	Database Search	VOC, SOC
81	LUST Site-Cleanup Completed; Impact Unknown	3-6	Database Search	VOC, SOC
82	LUST Site-Cleanup Completed; Impact Unknown	3-6	Database Search	VOC, SOC
83	LUST Site-Cleanup Completed; Impact Unknown	3-6	Database Search	VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
84	LUST Site-Cleanup Completed; Impact: Groundwater	3-6	Database Search	VOC, SOC
85	LUST Site-Cleanup Completed; Impact Unknown	3-6	Database Search	VOC, SOC
86	LUST Site-Cleanup Incomplete; Impact Unknown	3-6	Database Search	VOC, SOC
87	LUST Site-Cleanup Incomplete; Impact Unknown	3-6	Database Search	VOC, SOC
88	UST Site-Contractor; Closed	3-6	Database Search	VOC, SOC
89	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
90	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
91	UST Site-Federal Non-Military; Closed	3-6	Database Search	VOC, SOC
92	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
93	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
94	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
95	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
96	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
97	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
98	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
99	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
100	UST Site-Industrial; Closed	3-6	Database Search	VOC, SOC
101	UST Site-Truck/Transporter; Open	3-6	Database Search	VOC, SOC
102	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
103	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
104	UST Site-Contractor; Open	3-6	Database Search	VOC, SOC
105	UST Site-Auto Dealership; Closed	3-6	Database Search	VOC, SOC
106	UST Site-Federal Military; Open	3-6	Database Search	VOC, SOC
107	UST Site-Contractor; Closed	3-6	Database Search	VOC, SOC
108	UST Site-Commercial; Closed	3-6	Database Search	VOC, SOC
109	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
110	UST Site-State Government; Closed	3-6	Database Search	VOC, SOC
111	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
112	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
113	UST Site-Local Government; Closed	3-6	Database Search	VOC, SOC
114	UST Site-Local Government; Closed	3-6	Database Search	VOC, SOC
115	UST Site-Local Government; Closed	3-6	Database Search	VOC, SOC
116	UST Site-Local Government; Closed	3-6	Database Search	VOC, SOC
117	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
118	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
119	UST Site-Petroleum Distributor; Closed	3-6	Database Search	VOC, SOC
120	UST Site-Not Listed; Open	3-6	Database Search	VOC, SOC
121	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
122	UST Site-Auto Dealership; Open	3-6	Database Search	VOC, SOC
123	UST Site-Truck/Transporter; Closed	3-6	Database Search	VOC, SOC
124	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
125	UST Site-Contractor; Closed	3-6	Database Search	VOC, SOC
126	UST Site-Not Listed; Open	3-6	Database Search	VOC, SOC
127	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
128	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
129	UST Site-Not Listed; Open	3-6	Database Search	VOC, SOC
130	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
131	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
132	UST Site-Commercial; Closed	3-6	Database Search	VOC, SOC
133	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
134	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
135	UST Site-Local Government; Open	3-6	Database Search	VOC, SOC
136	UST Site-Not Listed; Open	3-6	Database Search	VOC, SOC
137	UST Site-Petroleum Distributor; Open	3-6	Database Search	VOC, SOC
138	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
139	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
140	UST Site-Utilities; Open	3-6	Database Search	VOC, SOC
141	UST Site-Not Listed; Open	3-6	Database Search	VOC, SOC
142	UST Site-Federal Non-Military; Closed	3-6	Database Search	VOC, SOC
143	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
144	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
145	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
146	UST Site-Commercial; Closed	3-6	Database Search	VOC, SOC
147	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
148	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
149	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
150	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
151	UST Site-Not Listed; Open	3-6	Database Search	VOC, SOC
152	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
153	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
154	UST Site-Commercial; Closed	3-6	Database Search	VOC, SOC
155	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
156	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
157	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
158	UST Site-Industrial; Closed	3-6	Database Search	VOC, SOC
159	UST Site-Not Listed; Closed	3-6	Database Search	VOC, SOC
160	UST Site-Commercial; Closed	3-6	Database Search	VOC, SOC
161	UST Site-Federal Non-Military; Open	3-6	Database Search	VOC, SOC
162	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
163	UST Site-Local Government; Open	3-6	Database Search	VOC, SOC
164	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
165	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
166	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
167	UST Site-Other; Closed	3-6	Database Search	VOC, SOC
168	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
169	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
170	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
171	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
172	UST Site-Contractor; Closed	3-6	Database Search	VOC, SOC
173	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
174	UST Site-Industrial; Closed	3-6	Database Search	VOC, SOC
175	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
176	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
177	UST Site-Auto Dealership; Closed	3-6	Database Search	VOC, SOC
178	UST Site-Commercial; Open	3-6	Database Search	VOC, SOC
179	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
180	UST Site-Federal Non-Military; Open	3-6	Database Search	VOC, SOC
181	UST Site-Auto Dealership; Closed	3-6	Database Search	VOC, SOC
182	UST Site-Auto Dealership; Closed	3-6	Database Search	VOC, SOC
183	UST Site-Petroleum Distributor; Closed	3-6	Database Search	VOC, SOC
184	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
185	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
186	UST Site-Gas Station; Closed	3-6	Database Search	VOC, SOC
187	UST Site-Gas Station; Open	3-6	Database Search	VOC, SOC
188	UST Site-Auto Dealership; Closed	3-6	Database Search	VOC, SOC
189	UST Site-Commercial; Closed	3-6	Database Search	VOC, SOC
190	UST Site-Truck/Transporter; Closed	3-6	Database Search	VOC, SOC
191	UST Site-Contractor; Open	3-6	Database Search	VOC, SOC
192	Dairy	3-6	Database Search	IOC
193	Laundries	3-6	Database Search	SOC
194	Oils-Fuel (Wholesale)	3-6	Database Search	VOC, SOC
195	Welding	3-6	Database Search	IOC, VOC
196	Storage-Household & Commercial	3-6	Database Search	IOC, VOC, SOC
197	Signs Manufacturers	3-6	Database Search	IOC, VOC, SOC
198	Auto Radiator-Repair	3-6	Database Search	IOC, VOC, SOC
199	Tools-Pneumatic (Wholesale)	3-6	Database Search	IOC, VOC, SOC
200	Auto Parts-Used & Rebuilt (Wholesale)	3-6	Database Search	VOC, SOC
201	Hardware-Retail	3-6	Database Search	IOC, VOC, SOC
202	Truck-Dealers-Used	3-6	Database Search	VOC, SOC
203	Farm Equipment (Wholesale)	3-6	Database Search	VOC, SOC
204	Boat Dealers	3-6	Database Search	VOC, SOC
205	Rental Service-Stores & Yards	3-6	Database Search	VOC, SOC
206	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
207	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
208	Engines-Rebuild & Repair	3-6	Database Search	IOC, VOC, SOC
209	Potato Harvesting/Planting Equipment	3-6	Database Search	VOC, SOC
210	Farm Equipment (Wholesale)	3-6	Database Search	VOC, SOC
211	Trucking-Motor Freight	3-6	Database Search	VOC, SOC
212	Fire Damage Restoration	3-6	Database Search	VOC, SOC
213	Veterinarians	3-6	Database Search	IOC, VOC
214	Veterinarians	3-6	Database Search	IOC, VOC
215	Tree Service	3-6	Database Search	VOC, SOC
216	Bicycles-Dealers	3-6	Database Search	VOC, SOC
217	Truck-Repairing & Service	3-6	Database Search	IOC, VOC, SOC
218	Pharmaceutical Products (Wholesale)	3-6	Database Search	IOC, VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
219	Contractors-Equipment/Supplies/Dealers	3-6	Database Search	IOC, VOC, SOC
220	Boat Repairing	3-6	Database Search	IOC, VOC, SOC
221	Satellite Equipment & Systems Manufacturers	3-6	Database Search	IOC, VOC
222	General Contractors	3-6	Database Search	IOC, VOC, SOC
223	Hardware (Wholesale)	3-6	Database Search	IOC, VOC, SOC
224	Contractors-Equipment/Supplies/Dealers	3-6	Database Search	IOC, VOC, SOC
225	Landscape Contractors	3-6	Database Search	IOC, VOC, SOC
226	Mufflers & Exhaust Systems-Engine	3-6	Database Search	IOC, VOC, SOC
227	Parking Area Maintenance & Marking	3-6	Database Search	VOC, SOC
228	Auto Detail & Clean-Up Service	3-6	Database Search	IOC, VOC, SOC
229	Auto Body Shop Equipment/Supplies (Wholesale)	3-6	Database Search	IOC, VOC, SOC
230	Plating Manufacturers	3-6	Database Search	IOC, VOC
231	Automobile Customizing	3-6	Database Search	IOC, VOC, SOC
232	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
233	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
234	Springs-Auto Sales & Service	3-6	Database Search	VOC, SOC
235	Farm Supplies (Wholesale)	3-6	Database Search	IOC, VOC, SOC
236	Automobile Dealers-New Cars	3-6	Database Search	VOC, SOC
237	Bags-Plastic (Manufacturers)	3-6	Database Search	VOC, SOC
238	Sausages/Other Prepared Meat Products	3-6	Database Search	IOC
239	Warehouses-Cold Storage	3-6	Database Search	IOC
240	Home Improvements	3-6	Database Search	IOC, VOC, SOC
241	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
242	Plumbing Drain & Sewer Cleaning	3-6	Database Search	IOC, VOC
243	Paint-Retail	3-6	Database Search	VOC
244	Carpet & Rug Cleaners	3-6	Database Search	VOC
245	Tire-Dealers Retail	3-6	Database Search	VOC, SOC
246	Bicycles-Dealers	3-6	Database Search	VOC, SOC
247	Motorcycles & Motor Scooters-Dealers	3-6	Database Search	VOC, SOC
248	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
249	Recreational Vehicles	3-6	Database Search	VOC, SOC
250	Outboard Motors	3-6	Database Search	VOC, SOC
251	Auto Radiator-Repair	3-6	Database Search	IOC, VOC, SOC
252	Auto Parts-Used & Rebuilt (Wholesale)	3-6	Database Search	VOC, SOC
253	Motorcycles & Motor Scooters-Dealers	3-6	Database Search	VOC, SOC
254	Petroleum Products (Wholesale)	3-6	Database Search	VOC, SOC
255	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
256	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
257	General Contractors	3-6	Database Search	IOC, VOC, SOC
258	Auto Restoration-Antiques	3-6	Database Search	IOC, VOC, SOC
259	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
260	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
261	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
262	Wheel Alignment-Frame & Axle Service	3-6	Database Search	VOC, SOC
263	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
264	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
265	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
266	Newspapers (Publishers)	3-6	Database Search	IOC, VOC
267	Boat Dealers	3-6	Database Search	VOC, SOC
268	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
269	Car Washing & Polishing	3-6	Database Search	IOC, VOC, SOC
270	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
271	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
272	Automobile Parts & Supplies-Retail	3-6	Database Search	VOC, SOC
273	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
274	Boat Repairing	3-6	Database Search	IOC, VOC, SOC
275	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
276	Recreational Vehicles	3-6	Database Search	VOC, SOC
277	Lawn Mowers	3-6	Database Search	VOC, SOC
278	Dairy Products-Wholesale	3-6	Database Search	IOC
279	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
280	Auto Parts-Used & Rebuilt (Wholesale)	3-6	Database Search	VOC, SOC
281	Service Stations-Gasoline & Oil	3-6	Database Search	VOC, SOC
282	Landscape Contractors	3-6	Database Search	IOC, VOC, SOC
283	Truck Equipment & Parts-Used (Wholesale)	3-6	Database Search	VOC, SOC
284	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
285	Pet Services	3-6	Database Search	IOC
286	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
287	Bottlers	3-6	Database Search	VOC
288	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
289	Signs Manufacturers	3-6	Database Search	IOC, VOC, SOC
290	Paint-Retail	3-6	Database Search	VOC
291	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
292	Electric Equipment & Supplies-Wholesale	3-6	Database Search	IOC, VOC
293	Cleaners	3-6	Database Search	VOC
294	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
295	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
296	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
297	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
298	Shelving Manufacturers	3-6	Database Search	VOC
299	Home Builders	3-6	Database Search	IOC, VOC, SOC
300	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
301	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
302	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
303	Cleaners	3-6	Database Search	VOC
304	Electric Equipment & Supplies-Wholesale	3-6	Database Search	IOC, VOC
305	Truck-Repairing & Service	3-6	Database Search	IOC, VOC, SOC
306	Concrete Contractors	3-6	Database Search	IOC, VOC, SOC
307	Lawn Mowers-Sharpen & Repair	3-6	Database Search	IOC, VOC, SOC
308	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
309	Playground Equipment Manufacturers	3-6	Database Search	IOC, VOC, SOC
310	Snow Removal Equipment Retail	3-6	Database Search	VOC, SOC
311	Decals Manufacturers	3-6	Database Search	IOC, VOC, SOC
312	Janitors Supplies (Wholesale)	3-6	Database Search	VOC
313	Crop Planting Cultivating & Protection	3-6	Database Search	IOC, VOC, SOC
314	Laboratories-Dental	3-6	Database Search	IOC, VOC, SOC
315	Truck-Repairing & Service	3-6	Database Search	IOC, VOC, SOC
316	Mold Makers	3-6	Database Search	VOC, SOC
317	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
318	Fire Damage Restoration	3-6	Database Search	VOC, SOC
319	Steel Fabricators	3-6	Database Search	IOC, VOC
320	Goldsmiths & Silversmiths	3-6	Database Search	IOC, VOC
321	Fuel Injection Equipment Repair	3-6	Database Search	IOC, VOC, SOC
322	Printers	3-6	Database Search	VOC
323	Landscape Contractors	3-6	Database Search	IOC, VOC, SOC
324	Motorcycles & Motor Scooters-Repair & Service	3-6	Database Search	IOC, VOC, SOC
325	Recreational Vehicles-Repair & Service	3-6	Database Search	IOC, VOC, SOC
326	Logging Companies	3-6	Database Search	VOC, SOC
327	Powder Coatings Manufacturers	3-6	Database Search	IOC, VOC, SOC
328	Paint-Retail	3-6	Database Search	VOC
329	Railroads	3-6	Database Search	IOC, VOC, SOC
330	Taxicabs	3-6	Database Search	VOC, SOC
331	Water Treatment Equip Service & Supplies	3-6	Database Search	IOC, SOC
332	Trucking-Motor Freight	3-6	Database Search	VOC, SOC
333	Machine Shops	3-6	Database Search	IOC, VOC, SOC
334	Electric Equipment & Supplies-Wholesale	3-6	Database Search	IOC, VOC
335	Automobile Dealers-New Cars	3-6	Database Search	VOC, SOC
336	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
337	Castings-Metals	3-6	Database Search	IOC, VOC
338	Movers	3-6	Database Search	VOC, SOC
339	Automobile Renting & Leasing	3-6	Database Search	VOC, SOC
340	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
341	Plants-Interior Design & Maintenance	3-6	Database Search	IOC, SOC
342	Batteries-Storage (Wholesale)	3-6	Database Search	IOC
343	Feed (Wholesale)	3-6	Database Search	IOC, SOC
344	Plumbing Fixtures & Supplies (Wholesale)	3-6	Database Search	IOC, VOC, SOC
345	Commercial Printing	3-6	Database Search	IOC, VOC
346	Water & Sewage Companies-Utility	3-6	Database Search	IOC, VOC
347	Screen Printing	3-6	Database Search	VOC
348	Ice Cream & Frozen Desserts Manufacturers	3-6	Database Search	IOC
349	Auto Seatcovers Tops & Upholstery	3-6	Database Search	VOC, SOC
350	Fire Departments	3-6	Database Search	VOC, SOC
351	Fire Departments	3-6	Database Search	VOC, SOC
352	Fire Damage Restoration	3-6	Database Search	VOC, SOC
353	Fire Departments	3-6	Database Search	VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
354	Fire Protection Equipment & Supplies	3-6	Database Search	VOC, SOC
355	Welding	3-6	Database Search	IOC, VOC
356	Oils-Fuel (Wholesale)	3-6	Database Search	VOC, SOC
357	Material Handling Equipment (Wholesale)	3-6	Database Search	IOC, VOC, SOC
358	Sun Rooms	3-6	Database Search	IOC, VOC
359	Photographic Equipment-Repair	3-6	Database Search	VOC
360	Tire-Dealers Retail	3-6	Database Search	VOC, SOC
361	Signs Manufacturers	3-6	Database Search	IOC, VOC, SOC
362	Bags-Plastic (Manufacturers)	3-6	Database Search	VOC, SOC
363	Paving Contractors	3-6	Database Search	VOC, SOC
364	Livestock Hauling	3-6	Database Search	VOC, SOC
365	Building Contractors	3-6	Database Search	IOC, VOC, SOC
366	Paint-Retail	3-6	Database Search	VOC
367	Rental Service-Stores & Yards	3-6	Database Search	VOC, SOC
368	Automobile Parts & Supplies-Retail	3-6	Database Search	VOC, SOC
370	Signs Manufacturers	3-6	Database Search	IOC, VOC, SOC
371	General Contractors	3-6	Database Search	IOC, VOC, SOC
372	Storage-Household & Commercial	3-6	Database Search	IOC, VOC, SOC
373	Wrecker Service	3-6	Database Search	IOC, VOC, SOC
374	Storage-Household & Commercial	3-6	Database Search	IOC, VOC, SOC
375	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
376	Roofing Contractors	3-6	Database Search	IOC, VOC, SOC
377	Septic Tanks-Cleaning & Repair	3-6	Database Search	IOC, VOC
378	Contractors-Equipment/Supplies/Dealers	3-6	Database Search	IOC, VOC, SOC
379	Tree Service	3-6	Database Search	VOC, SOC
380	Signs Manufacturers	3-6	Database Search	IOC, VOC, SOC
381	Publishers-Periodical	3-6	Database Search	IOC, VOC
382	Photographers-Portrait	3-6	Database Search	VOC
383	Home Improvements	3-6	Database Search	IOC, VOC, SOC
384	Concrete Contractors	3-6	Database Search	IOC, VOC, SOC
385	Wrecker Service	3-6	Database Search	IOC, VOC, SOC
386	Janitor Service	3-6	Database Search	VOC
387	Recreational Vehicles	3-6	Database Search	VOC, SOC
388	Laboratories-Dental	3-6	Database Search	IOC, VOC, SOC
389	Lawn Mowers	3-6	Database Search	VOC, SOC
390	Chemicals (Wholesale)	3-6	Database Search	IOC, VOC, SOC
391	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
392	Hydraulic Equipment & Supplies (Wholesale)	3-6	Database Search	VOC, SOC
393	Asphalt & Asphalt Products	3-6	Database Search	IOC, VOC, SOC
394	Barbers Equipment & Supplies Manufacturers	3-6	Database Search	VOC, SOC
395	Canvas Goods Manufacturers	3-6	Database Search	VOC
396	Ambulance Service	3-6	Database Search	VOC, SOC
397	Fire Departments	3-6	Database Search	VOC, SOC
398	Foundries-Steel	3-6	Database Search	IOC, VOC, SOC
399	Parking Area Maintenance & Marking	3-6	Database Search	VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
400	Parking Area Maintenance & Marking	3-6	Database Search	VOC, SOC
401	Water & Sewage Companies-Utility	3-6	Database Search	IOC, VOC
402	Electrical Industrial Apparatus Manufacturers	3-6	Database Search	IOC, VOC
403	Livestock Auction Markets	3-6	Database Search	IOC
404	Material Handling Equipment (Wholesale)	3-6	Database Search	IOC, VOC, SOC
405	Truck Equipment & Parts (Wholesale)	3-6	Database Search	VOC, SOC
406	Steel Fabricators	3-6	Database Search	IOC, VOC
407	Cut Stone & Stone Products Manufacturers	3-6	Database Search	IOC, VOC, SOC
408	Trailers-Truck (Wholesale)	3-6	Database Search	VOC, SOC
409	Radio/TV Broadcast/Communications Equipment	3-6	Database Search	VOC, SOC
410	Photo Finishing-Retail	3-6	Database Search	VOC
411	Boat Dealers	3-6	Database Search	VOC, SOC
412	Snow Removal Service	3-6	Database Search	VOC, SOC
413	Trailer-Manufacturers	3-6	Database Search	IOC, VOC, SOC
414	General Contractors	3-6	Database Search	IOC, VOC, SOC
415	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
416	Recycling Centers (Wholesale)	3-6	Database Search	IOC, VOC, SOC
417	Sewage Disposal Systems	3-6	Database Search	IOC, VOC, SOC
418	Excavating Contractors	3-6	Database Search	IOC, VOC, SOC
419	Auto Restoration-Antiques	3-6	Database Search	IOC, VOC, SOC
420	Grain Elevators	3-6	Database Search	IOC, SOC
421	Tire-Dealers Retail	3-6	Database Search	VOC, SOC
422	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
423	Machine Shops	3-6	Database Search	IOC, VOC, SOC
424	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
425	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
426	Engravers-Glassware Manufacturers	3-6	Database Search	VOC, SOC
427	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
428	Cabinets Manufacturers	3-6	Database Search	VOC, SOC
429	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
430	Tile-Ceramic-Contractors & Dealers	3-6	Database Search	VOC, SOC
431	Motorcycles & Motor Scooters-Repair & Service	3-6	Database Search	IOC, VOC, SOC
432	Publishers-Periodical	3-6	Database Search	IOC, VOC
433	General Contractors	3-6	Database Search	IOC, VOC, SOC
434	Potato Processing Equipment Manufacturers	3-6	Database Search	VOC, SOC
435	Ornamental Metal Work Manufacturers	3-6	Database Search	IOC, VOC
436	Lawn Mowers	3-6	Database Search	VOC, SOC
437	Auto Parts & Supplies Wholesale)	3-6	Database Search	VOC, SOC
438	Automobile Parts & Supplies-Retail	3-6	Database Search	VOC, SOC
439	Painters	3-6	Database Search	VOC
440	Paving Contractors	3-6	Database Search	VOC, SOC
441	Dresses Manufacturers	3-6	Database Search	VOC
442	Veterinarians	3-6	Database Search	IOC, VOC
443	Stereophonic & High Fidelity Equipment	3-6	Database Search	IOC, VOC
444	Tree Service	3-6	Database Search	VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
445	Lawn Maintenance	3-6	Database Search	IOC, SOC
446	Tire-Dealers Retail	3-6	Database Search	VOC, SOC
447	Transmissions-Automobile	3-6	Database Search	IOC, VOC, SOC
448	Welding Equipment & Supplies (Wholesale)	3-6	Database Search	IOC, VOC
449	Sporting Goods Manufacturers	3-6	Database Search	VOC
450	Printers	3-6	Database Search	VOC
451	Home Builders	3-6	Database Search	IOC, VOC, SOC
452	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
453	Wrecker Service	3-6	Database Search	IOC, VOC, SOC
454	Sportswear-Mens Manufacturers	3-6	Database Search	VOC
455	General Contractors	3-6	Database Search	IOC, VOC, SOC
456	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
457	Tile-Ceramic-Contractors & Dealers	3-6	Database Search	VOC, SOC
458	Drilling & Boring Contractors	3-6	Database Search	VOC
459	Ornamental Metal Work Manufacturers	3-6	Database Search	IOC, VOC
460	Dairy Products-Wholesale	3-6	Database Search	IOC
461	Mufflers & Exhaust Systems-Engine	3-6	Database Search	IOC, VOC, SOC
462	Movers	3-6	Database Search	VOC, SOC
463	Mufflers & Exhaust Systems-Engine	3-6	Database Search	IOC, VOC, SOC
464	Ornamental Metal Work Manufacturers	3-6	Database Search	IOC, VOC
465	Wrecker Service	3-6	Database Search	IOC, VOC, SOC
466	Storage-Household & Commercial	3-6	Database Search	IOC, VOC, SOC
467	Automobile Lubrication Service	3-6	Database Search	IOC, VOC, SOC
468	Cleaners	3-6	Database Search	VOC
469	Truck Equipment & Parts (Wholesale)	3-6	Database Search	VOC, SOC
470	State Government-National Security	3-6	Database Search	VOC, SOC
471	Automobile Parts & Supplies-Retail	3-6	Database Search	VOC, SOC
472	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
473	Veterinarians	3-6	Database Search	IOC, VOC
474	Plastics-Vacuum/Pressure Forming	3-6	Database Search	VOC, SOC
475	Printers	3-6	Database Search	VOC
476	Tire-Retreading & Repair	3-6	Database Search	VOC, SOC
477	Photographers-Portrait	3-6	Database Search	VOC
478	General Contractors	3-6	Database Search	IOC, VOC, SOC
479	Service Stations-Gasoline & Oil	3-6	Database Search	VOC, SOC
480	Photo Finishing-Retail	3-6	Database Search	VOC
481	Service Stations-Gasoline & Oil	3-6	Database Search	VOC, SOC
482	General Contractors	3-6	Database Search	IOC, VOC, SOC
483	Recycling Centers (Wholesale)	3-6	Database Search	IOC, VOC, SOC
484	Brake Service	3-6	Database Search	IOC, VOC, SOC
485	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
486	Drapery & Curtain Cleaners	3-6	Database Search	VOC
487	Automobile Parts & Supplies-Retail	3-6	Database Search	VOC, SOC
488	Remodeling/Repairing Building Contractors	3-6	Database Search	IOC, VOC, SOC
489	General Contractors	3-6	Database Search	IOC, VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
490	Gas Companies	3-6	Database Search	VOC, SOC
491	Delivery Service	3-6	Database Search	VOC, SOC
492	Barbers Equipment & Supplies (Wholesale)	3-6	Database Search	VOC, SOC
493	Auto Machine Shop Service	3-6	Database Search	IOC, VOC, SOC
494	Motorcycles & Motor Scooters-Supplies	3-6	Database Search	VOC, SOC
495	Photo Finishing-Retail	3-6	Database Search	VOC
496	Janitor Service	3-6	Database Search	VOC
497	Golf Courses-Public	3-6	Database Search	IOC, VOC, SOC
498	Home Builders	3-6	Database Search	IOC, VOC, SOC
499	Plastics-High Pressure Laminates	3-6	Database Search	VOC, SOC
500	Printers	3-6	Database Search	VOC
501	Newspapers (Publishers)	3-6	Database Search	IOC, VOC
502	Boat Repairing	3-6	Database Search	IOC, VOC, SOC
503	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
504	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
505	Hardware (Wholesale)	3-6	Database Search	IOC, VOC, SOC
506	Boat Dealers	3-6	Database Search	VOC, SOC
507	Printers	3-6	Database Search	VOC
508	Trucking-Liquid & Dry Bulk	3-6	Database Search	VOC, SOC
509	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
510	Farms	3-6	Database Search	IOC, SOC
511	Relays & Industrial Controls Manufacturers	3-6	Database Search	VOC, SOC
512	Trailers-Camping & Travel	3-6	Database Search	VOC, SOC
513	Snow Removal Equipment Retail	3-6	Database Search	VOC, SOC
514	General Contractors	3-6	Database Search	IOC, VOC, SOC
515	Industrial Measuring Manufacturers	3-6	Database Search	VOC, SOC
516	Rental Service-Stores & Yards	3-6	Database Search	VOC, SOC
517	Recreational Vehicles	3-6	Database Search	VOC, SOC
518	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
519	Painters	3-6	Database Search	VOC
520	Four Wheel Drive-Repair & Service	3-6	Database Search	IOC, VOC, SOC
521	Storage-Household & Commercial	3-6	Database Search	IOC, VOC, SOC
522	Automobile Parts & Supplies-Retail	3-6	Database Search	VOC, SOC
523	Bicycles-Dealers	3-6	Database Search	VOC, SOC
524	General Contractors	3-6	Database Search	IOC, VOC, SOC
525	Rope Manufacturers	3-6	Database Search	VOC, SOC
526	Brick-Clay Common & Face Manufacturers	3-6	Database Search	IOC, VOC, SOC
527	Automobile Dealers-New Cars	3-6	Database Search	VOC, SOC
528	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
529	Recreational Vehicles	3-6	Database Search	VOC, SOC
530	Automobile Dealers-New Cars	3-6	Database Search	VOC, SOC
531	Automobile Dealers-New Cars	3-6	Database Search	VOC, SOC
532	Auto Parts-Used & Rebuilt (Wholesale)	3-6	Database Search	VOC, SOC
533	Bicycles-Dealers	3-6	Database Search	VOC, SOC
534	Florists-Supplies (Wholesale)	3-6	Database Search	IOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
535	Automobile Parts & Supplies-Retail	3-6	Database Search	VOC, SOC
536	Truck Renting & Leasing	3-6	Database Search	VOC, SOC
537	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
538	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
539	Printers	3-6	Database Search	VOC
540	Machine Tools (Wholesale)	3-6	Database Search	IOC, VOC, SOC
541	Campgrounds	3-6	Database Search	IOC, VOC, SOC
542	General Contractors	3-6	Database Search	IOC, VOC, SOC
543	Bicycles-Dealers	3-6	Database Search	VOC, SOC
544	Automobile Dealers-New Cars	3-6	Database Search	VOC, SOC
545	Signs Manufacturers	3-6	Database Search	IOC, VOC, SOC
546	Automobile Dealers-New Cars	3-6	Database Search	VOC, SOC
547	Truck-Repairing & Service	3-6	Database Search	IOC, VOC, SOC
548	Bathtubs & Sinks-Repair & Refinish	3-6	Database Search	IOC, VOC, SOC
549	Photographers-Portrait	3-6	Database Search	VOC
550	Car Washing & Polishing	3-6	Database Search	IOC, VOC, SOC
551	Washers-Pressure	3-6	Database Search	IOC, VOC, SOC
552	Landscape Contractors	3-6	Database Search	IOC, VOC, SOC
553	General Contractors	3-6	Database Search	IOC, VOC, SOC
554	Transmissions-Truck Tractor Etc	3-6	Database Search	VOC, SOC
555	Paint-Retail	3-6	Database Search	VOC
556	Machine Shops	3-6	Database Search	IOC, VOC, SOC
557	Machine Shops	3-6	Database Search	IOC, VOC, SOC
558	Tile-Ceramic-Contractors & Dealers	3-6	Database Search	VOC, SOC
559	Farm Supplies (Wholesale)	3-6	Database Search	IOC, VOC, SOC
560	Auto Radiator-Repair	3-6	Database Search	IOC, VOC, SOC
561	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
562	Service Stations-Gasoline & Oil	3-6	Database Search	VOC, SOC
563	Photographers-Portrait	3-6	Database Search	VOC
564	Veterinarians	3-6	Database Search	IOC, VOC
565	Puzzles Manufacturers	3-6	Database Search	VOC
566	Steel Fabricators	3-6	Database Search	IOC, VOC
567	Carpet & Rug Cleaners	3-6	Database Search	VOC
568	Painters	3-6	Database Search	VOC
569	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
570	Auto Detail & Clean-Up Service	3-6	Database Search	IOC, VOC, SOC
571	Newspapers (Publishers)	3-6	Database Search	IOC, VOC
572	General Contractors	3-6	Database Search	IOC, VOC, SOC
573	Recycling Centers (Wholesale)	3-6	Database Search	IOC, VOC, SOC
574	Pet Services	3-6	Database Search	IOC
575	Automobile Body-Repairing & Painting	3-6	Database Search	IOC, VOC, SOC
576	Automobile Renting & Leasing	3-6	Database Search	VOC, SOC
577	Truck Renting & Leasing	3-6	Database Search	VOC, SOC
578	Truck Renting & Leasing	3-6	Database Search	VOC, SOC
579	Truck Renting & Leasing	3-6	Database Search	VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
580	Microfilm Service Equipment & Supplies	3-6	Database Search	VOC
581	Federal Government-National Security	3-6	Database Search	VOC, SOC
582	Service Stations-Gasoline & Oil	3-6	Database Search	VOC, SOC
583	Snowmobiles	3-6	Database Search	VOC, SOC
584	Printers	3-6	Database Search	VOC
585	Auto Parts-Used & Rebuilt (Wholesale)	3-6	Database Search	VOC, SOC
586	General Contractors	3-6	Database Search	IOC, VOC, SOC
587	Excavating Contractors	3-6	Database Search	IOC, VOC, SOC
588	Excavating Contractors	3-6	Database Search	IOC, VOC, SOC
589	Automobile Repairing & Service	3-6	Database Search	IOC, VOC, SOC
590	Trucking-Heavy Hauling	3-6	Database Search	VOC, SOC
591	Controls Systems/Regulators	3-6	Database Search	IOC, VOC, SOC
592	Wheels	3-6	Database Search	VOC, SOC
593	Ornamental Metal Work Manufacturers	3-6	Database Search	IOC, VOC
594	General Contractors	3-6	Database Search	IOC, VOC, SOC
595	Veterinarians	3-6	Database Search	IOC, VOC
596	Funeral Directors	3-6	Database Search	VOC
597	Automobile Dealers-Used Cars	3-6	Database Search	VOC, SOC
598	Automobile Lubrication Service	3-6	Database Search	IOC, VOC, SOC
599	Oils-Fuel (Wholesale)	3-6	Database Search	VOC, SOC
600	Roofing Contractors	3-6	Database Search	IOC, VOC, SOC
601	Service Stations-Gasoline & Oil	3-6	Database Search	VOC, SOC
602	Service Stations-Gasoline & Oil	3-6	Database Search	VOC, SOC
603	Automobile Lubrication Service	3-6	Database Search	IOC, VOC, SOC
604	Printers	3-6	Database Search	VOC
605	CERCLA Site	3-6	Database Search	IOC, VOC, SOC
606	CERCLA Site	3-6	Database Search	IOC, VOC, SOC
607	RCRA Site	3-6	Database Search	VOC, SOC
608	RCRA Site	3-6	Database Search	VOC, SOC
609	RCRA Site	3-6	Database Search	IOC, VOC, SOC
610	RCRA Site	3-6	Database Search	IOC, VOC, SOC
611	RCRA Site	3-6	Database Search	VOC
612	RCRA Site	3-6	Database Search	VOC, SOC
613	RCRA Site	3-6	Database Search	VOC
614	RCRA Site	3-6	Database Search	VOC
615	RCRA Site	3-6	Database Search	IOC, VOC, SOC
616	RCRA Site	3-6	Database Search	VOC
617	RCRA Site	3-6	Database Search	IOC, VOC, SOC
618	RCRA Site	3-6	Database Search	IOC, VOC, SOC
619	RCRA Site	3-6	Database Search	VOC, SOC
620	RCRA Site	3-6	Database Search	IOC, VOC, SOC
621	RCRA Site	3-6	Database Search	VOC, SOC
622	RCRA Site	3-6	Database Search	VOC, SOC
623	RCRA Site	3-6	Database Search	IOC, VOC, SOC
624	RCRA Site	3-6	Database Search	IOC, VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
625	RCRA Site	3-6	Database Search	IOC, VOC, SOC
626	RCRA Site	3-6	Database Search	IOC, VOC, SOC
627	RCRA Site	3-6	Database Search	IOC, VOC, SOC
628	RCRA Site	3-6	Database Search	IOC, VOC, SOC
629	RCRA Site	3-6	Database Search	IOC, VOC, SOC
630	RCRA Site	3-6	Database Search	IOC, VOC, SOC
631	RCRA Site	3-6	Database Search	VOC
632	RCRA Site	3-6	Database Search	VOC, SOC
633	RCRA Site	3-6	Database Search	IOC, VOC, SOC
634	RCRA Site	3-6	Database Search	VOC
635	RCRA Site	3-6	Database Search	VOC, SOC
636	RCRA Site	3-6	Database Search	IOC, VOC, SOC
637	RCRA Site	3-6	Database Search	IOC, VOC, SOC
638	RCRA Site	3-6	Database Search	IOC, VOC, SOC
639	RCRA Site	3-6	Database Search	IOC
640	Mine/Quarry	3-6	Database Search	IOC, VOC, SOC
641	Mine/Quarry	3-6	Database Search	IOC, VOC, SOC
642	Mine/Quarry	3-6	Database Search	IOC, VOC, SOC
643	Mine/Quarry	3-6	Database Search	IOC, VOC, SOC
644	Mine/Quarry	3-6	Database Search	IOC, VOC, SOC
645	Deep Injection Well	3-6	Database Search	IOC, VOC, SOC
646	Deep Injection Well	3-6	Database Search	IOC, VOC, SOC
647	Deep Injection Well	3-6	Database Search	IOC, VOC, SOC
648	Deep Injection Well	3-6	Database Search	IOC, VOC, SOC
649	Deep Injection Well	3-6	Database Search	IOC, VOC, SOC
650	Deep Injection Well	3-6	Database Search	IOC, VOC, SOC
651	Deep Injection Well	3-6	Database Search	IOC, VOC, SOC
652	Deep Injection Well	3-6	Database Search	IOC, VOC, SOC
653	Deep Injection Well	3-6	Database Search	IOC, VOC, SOC
654	SARA Site	3-6	Database Search	IOC, VOC, SOC
655	SARA Site	3-6	Database Search	IOC, VOC
656	SARA Site	3-6	Database Search	IOC, VOC, SOC
657	SARA Site	3-6	Database Search	VOC, SOC
658	SARA Site	3-6	Database Search	VOC, SOC
659	SARA Site	3-6	Database Search	VOC, SOC
660	SARA Site	3-6	Database Search	IOC, VOC, SOC
661	SARA Site	3-6	Database Search	IOC, VOC, SOC
662	SARA Site	3-6	Database Search	VOC, SOC
663	SARA Site	3-6	Database Search	IOC, VOC, SOC
664	SARA Site	3-6	Database Search	VOC, SOC
665	SARA Site	3-6	Database Search	VOC, SOC
666	SARA Site	3-6	Database Search	VOC, SOC
667	SARA Site	3-6	Database Search	IOC, VOC, SOC
668	SARA Site	3-6	Database Search	VOC, SOC
669	SARA Site	3-6	Database Search	VOC, SOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
670	SARA Site	3-6	Database Search	IOC, VOC, SOC
671	SARA Site	3-6	Database Search	IOC, VOC, SOC
672	SARA Site	3-6	Database Search	VOC, SOC
673	SARA Site	3-6	Database Search	IOC, VOC, SOC
674	SARA Site	3-6	Database Search	VOC, SOC
675	SARA Site	3-6	Database Search	IOC, VOC, SOC
676	Recharge Point	3-6	Database Search	IOC, VOC, SOC
677	Recharge Point	3-6	Database Search	IOC, VOC, SOC
678	Recharge Point	3-6	Database Search	IOC, VOC, SOC
679	AST Site	3-6	Database Search	VOC, SOC
680	AST Site	3-6	Database Search	VOC, SOC
681	AST Site	3-6	Database Search	VOC, SOC
682	Group 1 Site	3-6	Database Search	
683	Landfill	3-6	Database Search	IOC, VOC, SOC
684	Landfill	3-6	Database Search	IOC, VOC, SOC
	Union Pacific Railroad	6-10	GIS MAP	IOC, VOC, SOC
	Highway 26/91	6-10	GIS MAP	IOC, VOC, SOC
685	UST Site-Farm; Closed	6-10	Database Search	VOC, SOC
686	UST Site-Truck/Transporter; Open	6-10	Database Search	VOC, SOC
687	UST Site-Contractor; Open	6-10	Database Search	VOC, SOC
688	UST Site-Other; Closed	6-10	Database Search	VOC, SOC
689	UST Site-Other; Closed	6-10	Database Search	VOC, SOC
690	UST Site-Other; Open	6-10	Database Search	VOC, SOC
691	UST Site-Gas Station; Open	6-10	Database Search	VOC, SOC
692	UST Site-Gas Station; Open	6-10	Database Search	VOC, SOC
693	UST Site-Truck/Transporter; Open	6-10	Database Search	VOC, SOC
694	UST Site-Gas Station; Open	6-10	Database Search	VOC, SOC
695	Dairy	6-10	Database Search	IOC
696	Dairy	6-10	Database Search	IOC
697	Machine Shops	6-10	Database Search	IOC, VOC, SOC
698	Dog & Cat Kennels	6-10	Database Search	IOC
699	Cabinets Manufacturers	6-10	Database Search	VOC, SOC
700	Storage-Household & Commercial	6-10	Database Search	IOC, VOC, SOC
701	Motorcycles & Motor Scooters-Dealers	6-10	Database Search	VOC, SOC
702	Fertilizers (Wholesale)	6-10	Database Search	IOC
703	Truck-Dealers-Used	6-10	Database Search	VOC, SOC
704	Excavating Contractors	6-10	Database Search	IOC, VOC, SOC
705	Motorcycles & Motor Scooters-Dealers	6-10	Database Search	VOC, SOC
706	Farm Equipment Manufacturers	6-10	Database Search	VOC, SOC
707	Cleaning Compounds Manufacturers	6-10	Database Search	SOC
708	Farm Equipment (Wholesale)	6-10	Database Search	VOC, SOC
709	General Contractors	6-10	Database Search	IOC, VOC, SOC
710	Llamas	6-10	Database Search	IOC
711	Carpet & Rug Cleaners	6-10	Database Search	VOC
712	Labels-Paper Manufacturers	6-10	Database Search	VOC

Site #	Source Description[1]	TOT Zone (in years)[2]	Source of Information	Potential Contaminants[2]
713	Oils-Lubricating (Wholesale)	6-10	Database Search	VOC, SOC
714	Painters	6-10	Database Search	VOC
715	Hydraulic Equipment & Supplies (Wholesale)	6-10	Database Search	VOC, SOC
716	RCRA Site	6-10	Database Search	IOC, VOC, SOC
717	Mine/Quarry	6-10	Database Search	IOC, VOC, SOC
718	Mine/Quarry	6-10	Database Search	IOC, VOC, SOC
719	Mine/Quarry	6-10	Database Search	IOC, VOC, SOC
720	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
721	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
722	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
723	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
724	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
725	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
726	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
727	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
728	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
729	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
730	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
731	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
732	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
733	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
734	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
735	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
736	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
737	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
738	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
739	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
740	Deep Injection Well	6-10	Database Search	IOC, VOC, SOC
741	SARA Site	6-10	Database Search	IOC, VOC, SOC
742	SARA Site	6-10	Database Search	IOC, VOC, SOC
743	Recharge Point	6-10	Database Search	IOC, VOC, SOC
744	Recharge Point	6-10	Database Search	IOC, VOC, SOC
745	Recharge Point	6-10	Database Search	IOC, VOC, SOC
746	Group 1 Site	6-10	Database Search	
747	SARA Site-Fertilizers	0-3	Database Search	IOC
748	UST Site-Closed	0-3	Database Search	VOC, SOC
749	AST Site	0-3	Database Search	VOC, SOC
750	AST Site	0-3	Database Search	VOC, SOC
751	UST Site-Closed	0-3	Database Search	VOC, SOC
752	Lawn Maintenance	0-3	Database Search	IOC, SOC
753	Trucking-Motor Freight	0-3	Database Search	VOC, SOC
754	Trucking-Heavy Hauling	0-3	Database Search	VOC, SOC
755	Lawn and Garden Equipment	0-3	Database Search	IOC, VOC, SOC

[1] SARA = Superfund Amendments and Reauthorization Act, RCRA = Resource Conservation Recovery Act, TRI = Toxic Release Inventory, CERCLA = Comprehensive Environmental Response Compensation and Liability Act UST = underground storage tank, LUST = leaking underground storage tank, AST = aboveground storage tank,

[2]TOT = time-of-travel (in years) for a potential contaminant to reach the wellhead

[3] IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Appendix B

GPOD of Idaho
Susceptibility Analysis Worksheet

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)

2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.375)

Final Susceptibility Scoring:

0 - 5 Low Susceptibility

6 - 12 Moderate Susceptibility

≥ 13 High Susceptibility

Ground Water Susceptibility Report — Public Water System Name: GPOD OF IDAHO — WELL #1

Public Water System Number 6060102 — 7/29/02 11:59:07 AM

1. System Construction		SCORE
Drill Date	6/6/73	
Driller Log Available	YES	
Sanitary Survey (if yes, indicate date of last survey)	YES	1999
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	YES	0
Casing and annular seal extend to low permeability unit	NO	2
Highest production 100 feet below static water level	NO	1
Well located outside the 100 year flood plain	YES	0
Total System Construction Score		4

2. Hydrologic Sensitivity		
Soils are poorly to moderately drained	NO	2
Vadose zone composed of gravel, fractured rock or unknown	YES	1
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	NO	2
Total Hydrologic Score		6

3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	IRRIGATED CROPLAND	2	2	2	2
Farm chemical use high	YES	2	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		4	2	4	2

Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	48	79	75	17
(Score = # Sources X 2) 8 Points Maximum		8	8	8	8
Sources of Class II or III leacheable contaminants or	YES	45	79	30	
4 Points Maximum		4	4	4	
Zone 1B contains or intercepts a Group 1 Area	YES	0	0	2	0
Land use Zone 1B	Greater Than 50% Irrigated Agricultural Land	4	4	4	4
Total Potential Contaminant Source / Land Use Score - Zone 1B		16	16	18	12

Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Land Use Zone II	25 to 50% Irrigated Agricultural Land	1	1	1	
Potential Contaminant Source / Land Use Score - Zone II		4	4	4	0

Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	

Is there irrigated agricultural lands that occupy > 50% of	YES	1	1	1	
Total Potential Contaminant Source / Land Use Score - Zone III		3	3	3	0
Cumulative Potential Contaminant / Land Use Score		27	25	29	14
4. Final Susceptibility Source Score		15	15	16	15
5. Final Well Ranking		High	High	High	High